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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,824	11/15/2000	Wolfgang Papiernik	A33752 (071308.0102)	2917

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EXAMINER

PALADINI, ALBERT WILLIAM

ART UNIT	PAPER NUMBER
2125	8

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/713,824

Applicant(s)

PAPIERNIK ET AL.

Examiner

Albert W Paladini

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 10-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Lines 3-4 on page 6 state that "the computer 1 initially transforms the part program 2 into a polynomial series." According to the description of the part program 2 on page 5, the part program 2 contains a set of processing instructions. A polynomial series is generally an expansion of a mathematical function using polynomial coefficients. The relationship between a set of processing instructions and a mathematical expression is not understood.

Lines 12-13 on page 10 state, "The selected data record 2, 4, 6 or 15 is then used to determine at least one two-dimensional projection." There is no description of what the two dimensional projection depicts. Data record 2 contains processing instructions, data record 4 contains control instructions, data record 6 is some sort of polynomial series, and data set 15 contains processing instructions. In addition to the lack of clear description of the polynomial function, it is not understood how

mathematical data and process description data result in some sort of a two dimensional projection.

Appropriate correction and clarification is required.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 10-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10

The function of the third step recited in lines 7-9 does not add an understandable limitation to the first step recited in lines 3-4 and the second step recited in lines 5-6. In the first step, an initial data record comprising processing instructions is created. The second step entails creating a control data record for controlling the processing machine using the initial data record. The third step recited in lines 7-9 appears to extract data from the "initial data record" and the "control data record" and create same kind of a "two-dimensional projection." It is not understood how a subset of processing instructions and control data result in a two-dimensional projection, or how

the creation of the two-dimensional projection adds a logical sequential step to the simulation of a processing machine.

In addition, the steps do not clearly delineate a simulation process. The sequential steps appear to describe a method for controlling a machine, and not a simulation process.

Appropriate correction and clarification is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto (5291393).

This rejection is made to the extent that the claims are understood by addressing specific steps recited and by speculatively inferring the function and objectives of the steps, which have been not explained clearly.

In figure 1 Matsumoto discloses an NC machine tool apparatus for generating processing instructions utilized to control a three dimensional machining operation. The data record containing processing instructions is generated from the source work portion of memory 10A. This data is fed to the execution portion 14D where the control data is created to control the NC machine 24. . The simulation and two dimensional display are described by Matsumoto on lines 34-41 in column 11 where he states "Prior to the actual machining, if the operator requests a simulation of the produced NC work program 101 through the operator panel, 5, a simulation program stored in ROM 106 is initiated The simulation program analyzes the NC work program 101 stored in sector 104E of the RAM 104, calculates and interpolates coordinate data, and displays the resultant spatial data on the CRT display unit 4." Matsumoto does not explicitly discuss an initial data record for processing a control record for controlling the process, and using the initial data record and control data record to determine the two-dimensional projection.

It would have been obvious to one of ordinary skill in the art that memory 10 contains at least one processing data record, and that execution portion 14D contains at least one controlling record. As explained in paragraph 4, it is not understood how a two

dimensional projection is obtained by selecting some data from processing instructions and some data from control instructions.

Relevant Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Penn (5594652) discloses a method and apparatus for computer controlled manufacture of three dimensional objects which utilizes an integrated to perform each of the processing steps in a part layer in a single pass, and by dispensing and processing material only at locations of the plane of the objects produced that are necessary to support the next object layer.

Boland ((5682319) discloses a computer numerically controlled machine tool having a movable operative part movable along a programmed path determined by a part program where the operative part is incrementally moved along the programmed path.

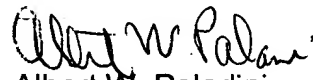
Brien (6341996) discloses a tool grinding simulation system where the simulation system includes a three dimensional image rendering engine arranged to produce a three dimensional rendered image of the work piece and, optionally, of the grinding wheel which can then be displayed on a visual display unit (VDU) of the simulation system.

9. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (703) 308-2005. The examiner can normally be reached from 7:30 to 3:30 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (703) 308-0538. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

March 16, 2004


Albert W. Paladini
Primary Examiner
Art Unit 2125